

**DPS****Montgomery County
Department of Permitting Services**

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Rockville, MD 20850-4166
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<http://www.montgomerycountymd.gov/permittingservices>

**REQUIREMENTS FOR THE SUBMITTAL OF NFPA 13 (ePLANS)**

Effective: May 1, 2016

Supersedes:
January 1, 2008

A. PERMIT PROCEDURES

1. Apply Online (ePermits) and ePlans (ProjectDox) accounts will need to be established prior to permit application and/or submittal. You can register for these by emailing dps.eservices@montgomerycountymd.gov or by calling 240-777-0311. Once your accounts are created you can apply for permits and upload plans here: <http://permittingservices.montgomerycountymd.gov/DPS/general/Home.aspx#>
2. Permit applications shall conform to all applicable codes and standards enforced by the State of Maryland and [Montgomery County](#).
3. For systems designed using other standards or codes please refer to requirements as appropriate. (e.g. NFPA 13D, NFPA 13R, NFPA 14, and NFPA 20)
4. For projects within the [City of Gaithersburg](#), contact their Fire Marshal at (301) 258-6330
5. For projects within the [City of Rockville](#), contact their Fire Marshal at (240) 314-8240.

B. GENERAL SUBMITTAL REQUIREMENTS

1. Drawing files shall be submitted separately (one drawing per file). The site plans are drawings.
2. Equipment submittal files shall be combined into a PDF book and submitted together as a single file.
3. Calculation files shall be submitted separately. Provide a list showing the file number, area/floor, and the drawing number for plans with more than 5 calculation files.

C. INFORMATION REQUIRED ON DRAWINGS

1. Plans shall include all information required by [NFPA 13 section 23.1.3](#).
2. Building permit number (where applicable).
3. Sprinkler contractor license number and expiration date (State of Maryland and Montgomery County license numbers).

D. BUILDING INFORMATION

1. The minimum accepted scale for floor plans is 1/8" per ft.
2. Provide details for ceiling obstructions (lights, bulkheads, etc.).
3. Provide floor elevation and building section elevation above sea level (corresponds to gradient information).

4. Provide location and rating of any and all fire doors, fire walls, and fire or smoke partitions, particularly when employing the room design method. All information provided shall be consistent with the latest DPS approved architectural plans.
5. Show water curtains and 18" draft stops for floor openings.
6. Any canopy with the potential for extended vehicle standing or parking below must have sprinkler protection on the underside of the canopy.
7. When a sprinkler system serves more than one level, each level must be consistently and separately valved by a listed and approved control valve. In addition, where a sprinkler system is required to activate a building fire alarm system, the sprinkler system must have a separate and distinct water flow detecting device for each floor and zone.
 - Exception 1: In buildings not exceeding three floors and 3000 square feet per floor.
 - Exception 2: Unoccupied and unused attics may be zoned with the level below.
 - Exception 3: Mezzanines not exceeding 3000 square feet in area.
 - Exception 4: Detention and correctional facilities.
8. Coordinate with fire alarm & smoke control zones. Atriums will usually require independent zones.
9. For 2 story floor openings not classified as atriums: sprinklers at the top must be zoned with the lower level if enclosed on the upper level; otherwise sprinklers must be zoned with the upper level.
10. Sprinklers are required under attached balconies or porches unless at least 50 percent of the longest exterior side is open to the atmosphere.

E. SITE PLAN / WATER INFORMATION

1. Provide an approved [WSSC](#) site plan for new water service.
2. Provide a hydraulic information sheet. (located on WSSC approved site plan)
3. For existing water service provide a flow test inside the building due to the unknown condition of the underground pipe. DPS does not need to witness this test. It must be no older than 1 year. You must adjust for low gradient as above and submit a copy of the test results with the submittal.

F. SPRINKLER / EQUIPMENT INFORMATION

1. In dwelling units, ordinary temperature sprinklers must be used.
2. Intermediate temperature sprinkler heads shall only be installed if an acceptable layout cannot be achieved without a sprinkler head in the high temperature area.
3. Listed residential sprinkler heads must be used in dwelling units except in detention and correctional occupancies.
4. When sprinklers are required, sprinklers must not be installed directly above shelving.
5. Dry pipe systems may only be installed where heat is not adequate to prevent freezing.
6. Sprinkler control valves (except elevator control valves) must be in stairs, valve rooms, or pump rooms for any building except schools.
7. Fire department connections must be located within 100 feet of a fire hydrant, and between 18 and 48 inches from grade to the centerline of the inlets.
8. Number of 2 1/2 in. inlets for FDC:

System Demand (GPM)	No. of Inlets
up to 749	2
750-999	3
1000 and above	4
9. Multiple connections for the same building must be interconnected.
10. When a section of a building is fed by a connection (i.e., partial systems), permanent all weather identification signs must be provided on connections.

11. The FDC must be sized at least as large as the main sprinkler system riser pipe or the fire pump discharge line, whichever is larger.

G. DESIGN/ CALCULATION INFORMATION

1. Calculations for new systems or new portions of systems must meet the criteria below.
 - (a) Highest hazard and most demanding use allowed by building construction permit or property zoning.
 - (b) Storage use: Available storage height for high storage of a class 4 non-encapsulated material.
 - (c) All uses: 20% safety factor. For systems without a pump, this is based on the demand pressure only at the supply point. For systems with a pump, this is based on both the demand pressure and demand flow at the pump discharge. All design options, except grids in speculative buildings, must be explored.
2. Exception to safety factor only: Owner occupied buildings may use a lower safety factor if a pump would be necessary to achieve the 20%. (Pressure and flow availability as determined by a hydraulic information sheet received from a public utility must be used for new taps. Pressure and flow availability for existing taps must be determined by an interior flow test. In any case, the supply information must be corrected for the low hydraulic gradient. Fire pumps and fire pump/tank supplies must only be used where it is demonstrated that the public water supply is inadequate.)
3. See [NFPA 13 section 23.3](#) for acceptable calculation forms and formats.
4. **Speculative Spaces** (subject to tenant changes regardless of lease term)
If project covers common areas, but not tenant areas, provide phantom calculations to establish sizing & spacing for future tenant work. Shell approval must include protection for all non-leasable areas including means of egress.
 - a.) Piping layout must be a tree or looped system; grids are not permitted.
 - b.) Sprinklers: Extended coverage sprinklers are not permitted in speculative business and mercantile occupancies.
 - c.) Include elevation loss in calculations to roof deck for future tenants without ceilings.
 - d.) If using QR area reduction, use full height to roof deck for future tenants without ceilings.
 - e.) Minimum 1" outlets shall be provided. Face bushings are not permitted.

H. TENANT PLAN INFORMATION

1. The tenant location must be clearly noted on the plan(s).
2. The [NOTES TO BE SHOWN ON TENANT SPRINKLER DRAWINGS](#) worksheet must appear on one of the submitted plans.
3. Provide arm-over and tie-in details.
4. Original criteria must be adhered to on any given floor. Criteria may only be changed on an "entire floor" basis.
5. Change to a higher hazard must be recalculated except rooms with 6 or less heads. These small rooms may use the same pipe sizing with a decrease in head spacing by density conversion. Example: Orig. head flow 16.8 gpm for 168 SF spacing at light hazard density of 0.10. New spacing for small mechanical room (ord. gr. 1) will be 16.8 gpm/0.15 density = 112 SF.
6. Change to a lesser hazard must use the same pipe sizing as shell calculations; spacing may be increased by density conversion. Example: Orig. head flow 20.0 gpm for 100 SF spacing at ordinary group 2 density of 0.20. New spacing for light hazard will be 20.0 gpm/ 0.10 density = 200 SF.
7. Newly plugged outlets must be considered heads for the purpose of pipe sizing.

NOTES TO BE SHOWN ON TENANT SPRINKLER DRAWINGS

Original hazard occupancy per calc: _____ calc area _____ density _____ safety factor _____

Original calculated pipe sizing: _____ sprinklers on _____ pipe

_____ sprinklers on _____ pipe

_____ sprinklers on _____ pipe

arm-over length _____

arm-over size _____

Original calculated sprinkler head spacing: _____ SF max.

Original pipe type: _____ original fitting type: _____

Original sprinkler information (SIN#, symbol, make, model, orifice, temp):

New pipe type: _____ new fitting type: _____

New sprinkler information (symbol, make, model, orifice, temp): - _____

Number of new sprinklers _____ relocated sprinklers (off original outlets) _____

Density conversion to higher hazard: $(\text{SF orig. flow}) / (\text{new density}) = \text{new spacing to be used in all rooms of hazard, group, with 6 or less heads.}$

Density conversion to lower hazard: $(\text{SF orig. flow}) / \text{new density} = \text{new spacing to be used in all rooms of hazard, group.}$

All rooms are _____ occupancy unless noted otherwise (indicate room name, not hazard class).

Ceiling height is _____ unless noted otherwise.

Laboratories are class per NFP A 45 according to owner rep _____

Hangers to be installed as required by NFPA 13; See detail # _____ for types of hangers.

A FILLABLE PDF VERSION OF THIS DOCUMENT IS AVAILABLE HERE: [TENANT SPRINKLER PLANS NOTES](#)